

10/532,570

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	636	(556/1).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:20
L2	504	(556/11).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:29
L3	531	(556/12).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:34
L4	432	(556/43).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:38
L5	645	(556/53).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:45
L6	360	(556/58).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:51
L7	612	(526/126).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 16:57
L8	2344	(526/160).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 17:17
L9	1956	(502/103).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 17:36
L10	2303	(502/117).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/04/16 17:36

10/532,570

(FILE 'HOME' ENTERED AT 18:10:06 ON 16 APR 2006)

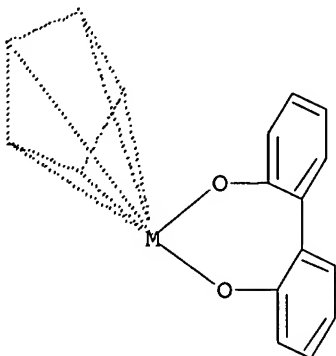
FILE 'REGISTRY' ENTERED AT 18:10:24 ON 16 APR 2006

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 18:10:55 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 3791 TO ITERATE

52.8% PROCESSED 2000 ITERATIONS 0 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 72128 TO 79512  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 18:11:00 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 75483 TO ITERATE

100.0% PROCESSED 75483 ITERATIONS 48 ANSWERS  
SEARCH TIME: 00.00.01

L3 48 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	166.94	167.15

FILE 'CAPLUS' ENTERED AT 18:11:06 ON 16 APR 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching

databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 16 Apr 2006 VOL 144 ISS 17  
FILE LAST UPDATED: 14 Apr 2006 (20060414/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s 12  
L4 0 L2

=> s 13  
L5 25 L3

=> d 1-25 bib abs

L5 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:370943 CAPLUS

DN 140:391376

TI Racemoselective preparation of isolable ansa-metallocene biphenoxide complexes

IN Damrau, Hans-Robert-Hellmuth; Mueller, Patrik; Garcia, Valerie; Sidot, Christian; Tellier, Christian; Lelong, Jean-Francois

PA Basell Polyolefine G.m.b.H., Germany

SO PCT Int. Appl., 49 pp.

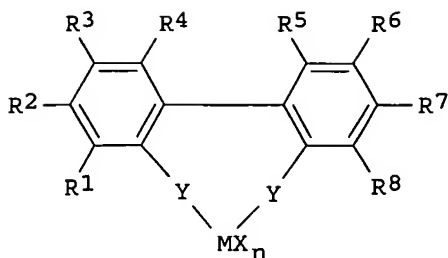
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004037839	A1	20040506	WO 2003-EP11680	20031022
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10250061	A1	20040506	DE 2002-10250061	20021025
	AU 2003283286	A1	20040513	AU 2003-283286	20031022
	EP 1554296	A1	20050720	EP 2003-775211	20031022
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006503887	T2	20060202	JP 2004-545930	20031022
	US 2006052587	A1	20060309	US 2005-532570	20050425
PRAI	DE 2002-10250061	A	20021025		
	US 2002-432202P	P	20021210		
	WO 2003-EP11680	W	20031022		
OS	CASREACT 140:391376; MARPAT 140:391376				
GI					



I

AB The invention relates to a process for preparing racemic metallocene biphenoxide complexes I (M = Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, rare earth, etc.; X = F, Cl, Br, I, H, C1-10 alkyl, C6-15 aryl, (un)substituted alkylaryl, n = 1-4 and corresponds to valance of M-2; R1, R2, R4, R5, R7, R8 = H, F, Cl, Br, I, C1-20 alkyl, (un)substituted 3-8 membered cycloalkyl, etc.; R3, R6 = same or different H, organoalkoxy, organothio, organoamino, organophosphino, organosilyl, etc.; Y = organometal, organodimetal, alkylidene, alkoxymetal, etc.) by reacting bridged transition metal complexes with cyclopentadienyl derivs. of alkali metals or alkaline earth metals and heating the reaction mixture obtained in this way to a temperature in the range from -78-250°, to the corresponding metallocene biphenoxide complexes and to their use as catalysts or as constituents of catalysts for the polymerization of olefinically unsatd. compds. or as reagents or catalysts in stereoselective synthesis. Thus, preparation of dimethylsilylbis(2-methylindenyl)zirconium 3,3'-di-tert-butyl-5,5'-dimethoxy-1,1'-bi-2-phenoxide is given in several steps starting from ZrCl4(THF)2 and dilithium salt of 3,3'-di-tert-butyl-5,5'-dimethoxy-1,1'-bi-2-phenoxide.

L5 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:367256 CAPLUS

DN 140:391375

TI Process for the racemoselective preparation of isolable ansa metallocene biphenolato complexes with shorter isomerization times

IN Damrau, Hans-Robert-Hellmuth; Sidot, Christian; Garcia, Valerie; Mueller, Patrik; Lelong, Jean-Francois; Tellier, Christian

PA Basell Polyolefine GmbH, Germany

SO Ger. Offen., 26 pp.

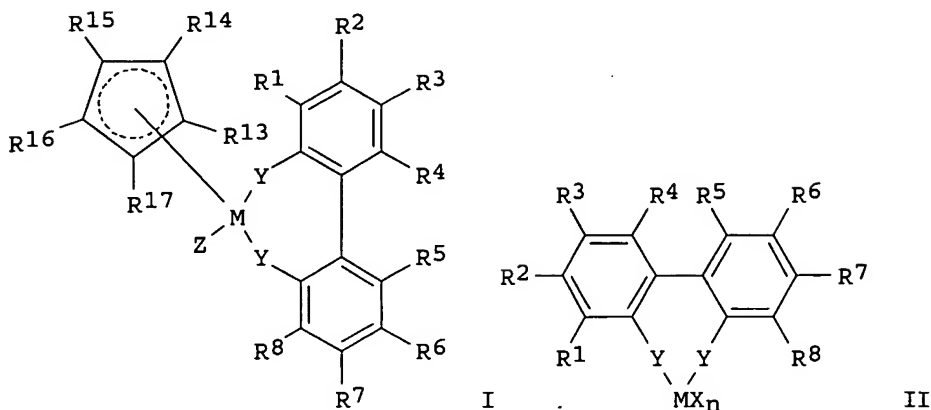
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10250061	A1	20040506	DE 2002-10250061	20021025
	WO 2004037839	A1	20040506	WO 2003-EP11680	20031022
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003283286	A1	20040513	AU 2003-283286	20031022
	EP 1554296	A1	20050720	EP 2003-775211	20031022
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006503887	T2	20060202	JP 2004-545930	20031022
	US 2006052587	A1	20060309	US 2005-532570	20050425
PRAI	DE 2002-10250061	A	20021025		
	US 2002-432202P	P	20021210		



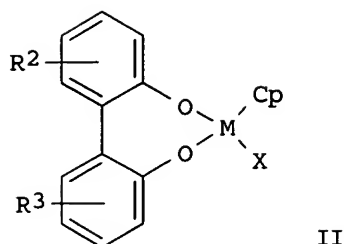
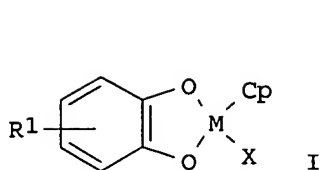
AB Racemic metallocene biphenolato complexes I [R1, R2, R4, R5, R7, R8 = H, halo, C1-20 alkyl, C3-8 cycloalkyl, C6-15 aryl, OR10, SR10, N(R10)2, P(R10)2, Si(R10)3; R3, R6 = H, OR11, SR11, N(R11)2, P(R11)2, Si(R11)3; R10 = hydrocarbyl; R11 = C1-20 alkyl, C3-8 cycloalkyl; R12 = H, halogen, hydrocarbyl; R13, R14, R15, R16, R17 = H, C1-20 alkyl, C5-7 cycloalkyl, etc.; R18 = C1-10 alkyl, C3-10 cycloalkyl, C6-15 aryl; M = Ti, Zr, Hf, V, Ni, Ta, Cr, Mo, W, Row III elements, lanthanides; M1 = Si, Ge, Sn; Y = M1(R12)2, M1(R12)2M1(R12)2, M1(R12)2C(R12)2, C(R12)2 OM1(R12)2, C(R12)2C(R12)2, BR12, AlR12, Ge, Sn, O, S, S(:O), SO2, NR12, C(:O), PR12, P(:O)R12, preferably O; Z = (un)substituted cyclopentadienyl, optionally linked to R16], useful as catalysts or as components of catalysts for the polymerization of olefinic unsatd. compds. or as reagents or catalysts in stereoselective synthesis (no data), are prepared by reaction of bridged transition metal complexes II [X = F, Cl, Br, I, H, C1-10 alkyl, C6-15 aryl, (C1-10 alkyl)-(C6-20 aryl), OR9, N(R9)2; n = 1-4 (valence of M minus 2); R9 = C1-20-alkyl, C3-8-cycloalkyl, C6-15-aryl, alkylaryl] with cyclopentadienyl derivs. of alkali or alkaline-earth metals, and warming the reaction mixture thus obtained at a temperature within the range of -78 to 250°. In an example, dimethylsilylbis(2-methylindenyl)zirconium(3,3'-di-tert-butyl-5,5'-dimethoxy-1,1'-bis-2-phenolate) was prepared in 63.5% yield as the pure racemic diastereomer.

L5 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2002:627694 CAPLUS  
 DN 137:140913  
 TI Olefin polymerization catalysts based on monocyclopentadienyl Group IV metal complexes containing bidentate binary aromatic phenolato ligands  
 IN Yi, Jianjun; Xu, Xuexiang; Zhao, Wei; Chen, Wei; Jing, Zhenhua  
 PA China Petrochemical Group Corp., Peop. Rep. China; Scientific Institute of Petroleum Chemical Industry, SINOPEC  
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp.  
 CODEN: CNXXEV

DT Patent  
 LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1324868	A	20011205	CN 2000-107483	20000519
	CN 1132855	B	20031231		
PRAI	CN 2000-107483		20000519		
OS	MARPAT 137:140913				
GI					



AB The title catalysts of the structure I or II ( $R_1$ - $R_3$  = H, C1-8 alkyl, C1-18 perfluoroalkyl, C6-24 aryl or alkylaryl; M = Group IV metal, e.g., Ti or Zr; X = Cl, Br, benzyl or C1-24 alkyl or alkoxy; Cp = (un)substituted cyclopentadienyl, indenyl or fluorenyl ligand) were synthesized by one of the following procedures (1) treating a strong alkali base, e.g., HNa, with the neutral binary aromatic phenol in an ether solvent to obtain a binary phenolate salt and reacting with  $CpMX_3$ , (2) treating  $CpMX_3$  with the neutral binary aromatic phenol in the presence of a tertiary amine, e.g.,  $NEt_3$ , in a molar ratio of 1:1:2, and (3) treating  $MX_4$  with the neutral binary aromatic phenol in a tertiary amine in a molar ratio of 1:1:2 to obtain a (phenolato) $MX_2$  intermediate and subsequently reacting with an alkali metal cyclopentadienyl salt. The complexes can be used as catalysts for ethylene polymerization and produce polyethylene with wide mol. weight distribution.

L5 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:444615 CAPLUS

DN 137:279281

TI Formation of planar-chiral alkylphosphine- and aniline-substituted cyclopentadienyl metal complexes and their reactivity toward electrophiles

AU Paisner, Sara N.; Lavoie, Gino G.; Bergman, Robert G.

CS Department of Chemistry and the Center for New Directions in Organic Synthesis (CNDOS), University of California, Berkeley, CA, 94720-1460, USA

SO Inorganica Chimica Acta (2002), 334, 253-275

CODEN: ICHAA3; ISSN: 0020-1693

PB Elsevier Science B.V.

DT Journal

LA English

OS CASREACT 137:279281

AB A wide range of transition metal complexes containing aniline- and alkylphosphine-substituted cyclopentadienyl ligands have been synthesized:  $CpPIr(CH_3)_2$  (5),  $CpPIr(H)(Li)$  (11a,b),  $CpPIr(H)(SnPh_3)$  (13a,b) ( $CpP$  = 1-(2-dimethylphosphino-1,1-dimethylethyl)-3-tert-butylcyclopentadienyl),  $CpNIr(C_2H_4)_2$  (7),  $CpNIrI_2$  (8),  $CpNIr(O_3SCF_3)_2$  (9),  $CpN(PMe_3)IrI_2$  (10),  $CpN(PMe_3)IrH_2$  (2),  $CpN(PMe_3)Ir(H)(Li)$  (15a,b),  $CpN(PMe_3)Ir(H)(SnPh_3)$  (16a,b) ( $CpN$  = 1-(2-dimethylamino)phenyl-3-tert-butylcyclopentadienyl),  $CpPZrCl_3$  (18),  $CpPZr(CH_2Ph)_3$  (23),  $CpPZr(CH_2Ph)_2Cl$  (20),  $[(CpP)TiCl_3]_2$  (22),  $CpNCp'ZrCl_2$  ( $Cp'$  = Cp (23),  $Cp^*$  (24)), and  $CpPCp'ZrCl_2$  ( $Cp'$  = Cp (25),  $Cp^*$  (26)). The presence of the planar-chiral  $CpP$  and  $CpN$  ligands dramatically changes the reactivity at the metal center in comparison to that of the analogous unchelated and achiral pentamethylcyclopentadienyl ( $Cp^*$ ) complexes. Lithium salts 11 and 15 were obtained by deprotonation of dihydride 2 and the earlier prepared dihydride  $CpPIrH_2$  (1) with tert-butyllithium; these reactive species show diastereoselectivity in their reactions with  $Ph_3SnCl$  to form 13a,b and 16a,b, resp. One enantiomer of diiodide 3 was found to react selectively with (R)-binaphthol to form (R,R)- $CpPIr(binaphtholate)$  (17a) leaving (S)-3 unreacted. Attempts to sep. the enantiomers of 3 and 17a were unsuccessful, however, due to the lack of difference in their solubility DFT calcs. carried out on the two possible diastereomers 17a and 17b correctly predict the exclusive formation of 17a. The zirconium and titanium complexes catalyze the polymerization of ethylene to polyethylene and propylene to isotactic polypropylene in the presence of MAO co-catalyst. Comps. 24 and 26 can be methylated to form  $Cp'Cp^*ZrMe_2$  ( $Cp'$  = CpN (27),  $CpP$  (28)).

RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:10491 CAPLUS

DN 136:69969

TI Method for the selective production of racemic metallocene complexes  
IN Damrau, Robert; Mueller, Patrik; Royo, Eva; Brintzinger, Hans-Herbert  
PA Basell Polyolefine G.m.b.H., Germany  
SO PCT Int. Appl., 56 pp.  
CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002000672	A1	20020103	WO 2001-EP7389	20010628
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 10030638	A1	20020110	DE 2000-10030638	20000629
	EP 1294734	A1	20030326	EP 2001-965046	20010628
	EP 1294734	B1	20040519		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004501928	T2	20040122	JP 2002-505794	20010628
	BR 2001012050	A	20040210	BR 2001-12050	20010628
	AT 267205	E	20040615	AT 2001-965046	20010628
	ES 2219557	T3	20041201	ES 2001-1965046	20010628
	US 2004010157	A1	20040115	US 2003-312359	20030605
	US 6992204	B2	20060131		
PRAI	DE 2000-10030638	A	20000629		
	WO 2001-EP7389	W	20010628		
OS	CASREACT 136:69969; MARPAT 136:69969				
AB	The invention relates to a method for producing racemic metallocene complexes by reacting bridged or non-bridged transition metal complexes with cyclopentadienyl derivs. of alkaline or alkaline earth metals and optionally, subsequently substituting the phenolate ligands. Thus, reaction of Me <sub>2</sub> Si(2-Me-ind) <sub>2</sub> Li <sub>2</sub> with Cl <sub>2</sub> (THF) <sub>2</sub> Zr(bip) (bip = 3,3'-5,5'-tetra-tert-Bu-1,1'-bi-2-phenolate) in PhMe/THF gave 22% rac-Me <sub>2</sub> Si(2-Me-ind) <sub>2</sub> Zr(bip).				
RE.CNT	12	THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD			
		ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L5 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:809561 CAPLUS

DN 136:85899

TI Racemo-Selective Synthesis of ansa-Zirconocene Derivatives from Zirconium Biphenolate Complexes

AU Damrau, Hans-Robert H.; Royo, Eva; Obert, Stephan; Schaper, Frank; Weeber, Armin; Brintzinger, Hans-Herbert

CS Fakultät fuer Chemie, Universitaet Konstanz, Konstanz, D-78457, Germany

SO Organometallics (2001), 20(25), 5258-5265

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 136:85899

AB Stereoselective reactions of zirconium biphenolate complexes of the general formula (BIP)ZrCl<sub>2</sub>(THF)<sub>2</sub> (1a-c), where BIP = 3,3'-iPr<sub>2</sub>-6,6'-Me<sub>2</sub>-1,1'-bi-2-phenolate (a), 3,3'-tBu<sub>2</sub>-5,5'-Me<sub>2</sub>-1,1'-bi-2-phenolate (b), or 3,3',5,5'-tBu<sub>4</sub>-1,1'-bi-2-phenolate (c), with 1 equiv of the lithium or magnesium salts of various ansa-bis(indenyl) ligands give the ansa-zirconocenes rac-C<sub>2</sub>H<sub>4</sub>(Ind)<sub>2</sub>Zr(BIP) (2b), rac-Me<sub>2</sub>Si(Ind)<sub>2</sub>Zr(BIP) (3c), rac-Me<sub>2</sub>Si(2-Me-Ind)<sub>2</sub>Zr(BIP) (4c), rac-Me<sub>2</sub>Si(2-Me-4-Ph-Ind)<sub>2</sub>Zr(BIP) (5c), and rac-Me<sub>2</sub>Si(2-Me-Benz[e]Ind)<sub>2</sub>Zr(BIP) (6c) in isolated yields of 60-75%.

Reactions of  $\text{C}_2\text{H}_4(\text{Ind})_2\text{Mg}(\text{THF})_2$  with 1a and 1b and of  $\text{Me}_2\text{Si}(\text{Ind})_2\text{Li}_2$  with 1c give directly the pure diastereomers rac-2a, rac-2b, and rac-3c, resp. More highly substituted indenyl ligands, on the other hand, give initially kinetically controlled mixts. of the rac- and meso-zirconocene BIP derivs. 4c, 5c, and 6c, from which the pure rac-derivs. are obtained as thermodynamically favored products by heating the reaction mixts. to 75° for 5-7 h. The meso-to-rac isomerization of 6c is catalyzed by addition of TEMPO and is thus likely to occur by way of radical intermediates. Crystal and mol. structures of 1b and 2b and of 1c and 6c indicate that formation of the racemo diastereomers is favored by repulsive interactions between biphenolate and ansa-bis(indenyl) ligands. In polymerization studies, complex 4c, in the presence of MAO, polymerized propene to give polypropylene with an isotacticity of 84%.

RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:325809 CAPLUS

DN 135:318732

TI UV/VIS studies on the activation of zirconocene-based olefin-polymerization catalysts

AU Wieser, Ulrich; Brintzinger, Hans-Herbert

CS Universitat Konstanz, Konstanz, D-78457, Germany

SO Organometallic Catalysts and Olefin Polymerization (2001), 3-13.

Editor(s): Blom, Richard. Publisher: Springer-Verlag, Berlin, Germany.

CODEN: 69BGVD

DT Conference

LA English

AB Equilibrium leading to the formation of active zirconocene catalysts were studied by observing changes in the positions of ligand-to-metal charge transfer bands of these complexes. UV/VIS-spectra of  $\text{Me}_2\text{Si}(\text{Ind})_2\text{ZrX}_2$  (X = Cl, Me) and  $\text{Me}_2\text{Si}(2\text{-Me-Benzind})_2\text{ZrX}_2$  (X = Cl, Me) treated with MAO or, in the case of X = Me, with  $\text{PhNMe}_2\text{H}^+$  ( $\text{F5C6}$ ) $4\text{B}^-$  indicate that binuclear species of the type  $(\text{Cpx}_2\text{ZrMe})_2(\mu\text{-Me})^+$  are not formed in the MAO-activated reaction systems. Spectra obtained for MAO-activated catalysts are identical irrespectively of whether they are derived from dichloride, di-Me or bi-phenolate zirconocene derivs. The abstracted ligands thus appear to be without coordinative contact to the cationic Zr center. Spectra of the species generated with large MAO excess (>1000:1) indicate that cationic trimethylaluminum adducts are formed, as judged by their similarity to spectra of hetero-metallic dinuclear cations of the type  $\text{Cpx}_2\text{Zr}(\mu\text{-Me})_2\text{AlMe}_2$  ( $\text{F5C6}$ ) $4\text{B}^-$ . These adducts thus appear to be the catalytically most active entities in MAO-activated reaction systems.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:194204 CAPLUS

DN 135:55143

TI High performance liquid chromatography for facile analytical separation of the enantiomers of chiral organometallic complexes

AU Paisner, S. N.; Bergman, R. G.

CS Department of Chemistry, University of California, Berkeley, CA, 94720, USA

SO Journal of Organometallic Chemistry (2001), 621(1-2), 242-245

CODEN: JORCAI; ISSN: 0022-328X

PB Elsevier Science S.A.

DT Journal

LA English

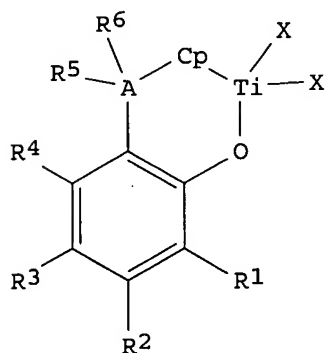
AB The applicability of chiral HPLC for the rapid anal. of the enantiopurity of organoiridium and -molybdenum complexes is demonstrated. Halogen-substituted metal complexes showed the best separation and the longest elution times. Separation of enantiomers of planar chiral zirconium and titanium complexes was also attempted although unsuccessfully. Preparative-scale columns are useful for the separation of racemic material into synthetically useful amts. of pure enantiomers.

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT



L5 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2000:34598 CAPLUS  
 DN 132:78697  
 TI Method for producing alkoxy and aminotitanium complexes  
 IN Hanaoka, Hideñori; Oda, Yoshiaki; Sohda, Hiroshi  
 PA Sumitomo Chemical Company, Limited, Japan  
 SO Eur. Pat. Appl., 40 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 970964	A2	20000112	EP 1999-113559	19990707
	EP 970964	A3	20010606		
	EP 970964	B1	20040421		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2000086678	A2	20000328	JP 1998-257006	19980910
	JP 3674332	B2	20050720		
	JP 2000086679	A2	20000328	JP 1998-257007	19980910
	JP 3744224	B2	20060208		
	US 6090961	A	20000718	US 1999-348312	19990707
	JP 2000119287	A2	20000425	JP 1999-194350	19990708
PRAI	JP 1998-194620	A	19980709		
	JP 1998-257006	A	19980910		
	JP 1998-257007	A	19980910		
OS	CASREACT 132:78697; MARPAT 132:78697				
GI					



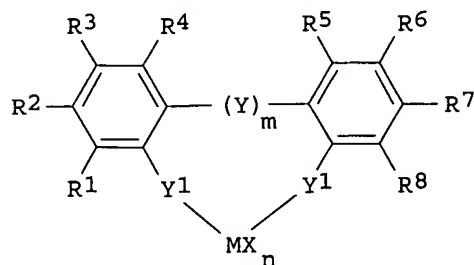
AB A process for the preparation of ortho-metalated (cyclopentadienylmethylphenoxy) titanium complex of formula (I), wherein Cp is a group having cyclopentadienyl type anion skeleton, A represents a carbon or silicon atom, R1, R2, R3, R4, R5 and R6 each independently represents a hydrogen atom or an alkyl or alkoxy or amino group having 1 to 10 carbon atoms and X can represent an alkoxy group, OR7, wherein the R7 groups may be alkyl groups having 1 to 10 carbon atoms or may form a ring, which comprises reacting the corresponding dihalide complex I (e.g., X = Cl) with a metal alkoxide, MOR7 wherein M may be an alkali metal and R7 is defined above. E.g., an anhydrous ether solution of MeLi was added dropwise to MeOH at 20° to give a solution of lithium methoxide to which titanium dichloride complex I (Cp = C5Me4, R1 = tBu, R2 = R4 = H, R3 = R5 = R6 = Me, A = Si, X = Cl) in ether was subsequently added at -78° to give yellow crystals of the dimethoxide complex I (all variables are the same except X = OMe) in 95% yield.

L5 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:459656 CAPLUS  
 DN 131:286585  
 TI Asymmetric Thermal Transformation, a New Way to Enantiopure Biphenyl-Bridged Titanocene and Zirconocene Complexes: Efficient Catalysts for Asymmetric Imine Hydrogenation. [Erratum to document cited in

CA130:237655]  
 AU Ringwald, Markus; Stuermer, Rainer; Brintzinger, Hans H.  
 CS Fakultaet fuer Chemie, Universitaet Konstanz, Konstanz, D-78457, Germany  
 SO Journal of the American Chemical Society (1999), 121(31), 7278  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB On page 1526, column 2, the products of Scheme 6 should be the (R)-enantiomers; the correct scheme is given.

L5 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:220214 CAPLUS  
 DN 130:223419  
 TI Method for selective preparation of racemic metallocene complexes as polymerization catalysts  
 IN Gregorius, Heike; Sueling, Carsten; Bidell, Wolfgang; Brintzinger, Hans-Herbert; Damrau, Hans-Robert-Hellmuth; Weber, Armin  
 PA BASF A.-G., Germany  
 SO Ger. Offen., 24 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19741876	A1	19990325	DE 1997-19741876	19970923
	WO 9915538	A1	19990401	WO 1998-EP5918	19980917
	W: BR, CN, JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1017702	A1	20000712	EP 1998-948986	19980917
	EP 1017702	B1	20030212		
	R: AT, BE, DE, ES, FR, GB, IT, NL, FI				
	BR 9812084	A	20000926	BR 1998-12084	19980917
	JP 2001517673	T2	20011009	JP 2000-512843	19980917
	AT 232538	E	20030215	AT 1998-948986	19980917
	ES 2192791	T3	20031016	ES 1998-948986	19980917
	US 6262286	B1	20010717	US 2000-508970	20000320
PRAI	DE 1997-19741876	A	19970923		
	WO 1998-EP5918	W	19980917		
OS	MARPAT 130:223419				
GI					



I

AB The preparation of racemic metallocene complexes I (M = Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, etc.; X = F, Cl, Br, I, H, C1-20 alkyl, C6-15 aryl, alkylaryl, etc.; n = 1-4; R1, R8 = same or different F, Cl, Br, I, C1-20 alkyl, C3-8 cyclyl, etc.; R2, R7 = same or different H, C1-20 alkyl, C3-8 cyclyl, Y, Y1 = same or different organoboryl, organoalumino, germaniumdiyl, tindiy, sulfido, SO, SO2, organoamino, organophosphino, etc.), useful as polymerization

catalysts, were prepared by the reaction of transition metal phenolato complexes with cyclopentadienyl salts. Thus, reaction of 2,2'-dihydroxy-3,3'-tert-butyl-5,5'-methylbiphenyl with NaH followed by treatment with ZrCl<sub>4</sub>·2THF gave title compound, dichlorobis(6-tert-butyl-4-methylphenoxy)zirconium·2THF.

L5 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:82168 CAPLUS

DN 130:237655

TI Asymmetric Thermal Transformation, a New Way to Enantiopure Biphenyl-Bridged Titanocene and Zirconocene Complexes: Efficient Catalysts for Asymmetric Imine Hydrogenation

AU Ringwald, Markus; Stuermer, Rainer; Brintzinger, Hans H.

CS Fakultät für Chemie, Universität Konstanz, Konstanz, D-78457, Germany

SO Journal of the American Chemical Society (1999), 121(7), 1524-1527

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 130:237655

AB Enantiopure biphenyl-bridged titanocene and zirconocene complexes were obtained, by an asym. thermal transformation of the binaphthol complexes formed from the metallocene racemates and subsequent transformation to the corresponding dichlorides, in practically quant. yields. Increased rates of this transformation in the presence of O<sub>2</sub> gas or TEMPO indicate a radical reaction mechanism. The biphenyl-bridged titanocene enantiomers give rise to an efficient asym. catalysis for the hydrogenation of cyclic and noncyclic imines.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:690764 CAPLUS

DN 127:358916

TI ansa-Metallocene derivatives. XXXIX. Biphenyl-bridged metallocene complexes of titanium, zirconium, and vanadium: syntheses, crystal structures and enantioseparation

AU Huttenloch, Monika E.; Dorer, Birgit; Rief, Ursula; Prosenc,

Marc-Heinrich; Schmidt, Katrin; Brintzinger, Hans H.

CS Fakultät Chemie, Univ. Konstanz, Konstanz, D-78457, Germany

SO Journal of Organometallic Chemistry (1997), 541(1-2), 219-232

CODEN: JORCAI; ISSN: 0022-328X

PB Elsevier

DT Journal

LA English

AB Chiral, biphenyl-bridged metallocene complexes of general type biph(3,4-R<sub>2</sub>C<sub>5</sub>H<sub>2</sub>)<sub>2</sub>MC<sub>12</sub> (biph = 1,1'-biphenyldiyl) were synthesized and characterized. For the dimethyl-substituted titanocenes and zirconocenes (R = CH<sub>3</sub>; M = Ti, Zr), preps. with increased overall yields and an optical resolution method were developed. The bis(2-tetrahydroindenyl) complexes (R,R = (CH<sub>2</sub>)<sub>4</sub>; M = Ti, Zr) were obtained by an alternative synthetic route and characterized with regard to their crystal structures. Syntheses of the phenyl-substituted derivs. (R = C<sub>6</sub>H<sub>5</sub>; M = Ti, Zr) and of a chiral, methyl-substituted vanadocene complex (R = CH<sub>3</sub>; M = V) are also reported.

RE.CNT 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:207696 CAPLUS

DN 126:264146

TI Photochemical Isomerization of Me<sub>2</sub>Si-Bridged Zirconocene Complexes. Application to Stereoselective Syntheses of ansa-Zirconocene Binaphtholate Stereoisomers

AU Schmidt, Katrin; Reinmuth, Annette; Rief, Ursula; Diebold, Josef; Brintzinger, Hans H.

CS Fakultät für Chemie, Universität Konstanz, Konstanz, D-78434, Germany

SO Organometallics (1997), 16(8), 1724-1728

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 126:264146

AB Upon irradiation in toluene solution, meso-racemate mixts. of  $\text{Me}_2\text{Si}(2\text{-Me-4-tert-Bu-C}_5\text{H}_2)_2\text{ZrCl}_2$  or  $\text{Me}_2\text{Si}(2\text{-Me-4-phenyl-C}_5\text{H}_2)_2\text{ZrCl}_2$  react with 1 equiv of the dilithium salt of racemic binaphthol quant. to give the racemic binaphtholate complex. Analogous reactions with 1 equiv of the R(+) enantiomer of dilithium binaphtholate give a near-quant. yield of the enantiomerically pure ansa-zirconocene binaphtholate complex. The structures of the racemic binaphtholate complex,  $\text{Me}_2\text{Si}(2\text{-Me-4-tert-Bu-C}_5\text{H}_2)_2\text{Zr}(\text{binaphtholate})$ , and of a monodentate binaphtholate complex with a meso configured zirconocene moiety,  $\text{Me}_2\text{Si}(3\text{-tert-Bu-C}_5\text{H}_3)_2\text{Zr}(\text{binaphtholate})$  chloride, were crystallog. determined

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:192363 CAPLUS

DN 126:264148

TI ansa-Metallocene derivatives. Part XXXVII. ansa-Vanadocene complexes - syntheses, structures and ligand exchange reactions

AU Dorer, Birgit; Prosenc, Marc-Heinrich; Rief, Ursula; Brintzinger, Hans-Herbert

CS Fakultat Chem., Univ. Konstanz, Konstanz, 78434, Germany

SO Collection of Czechoslovak Chemical Communications (1997), 62(2), 265-278  
CODEN: CCCCCA; ISSN: 0010-0765

PB Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic

DT Journal

LA English

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Tetramethylethano-bridged vanadocene dichlorides I (R = H, Me, t-Bu) were obtained by reacting the corresponding ligand  $\text{MgCl}$  salts with V(III) acetylacetonato compds., followed by oxidation with  $\text{PCl}_3$  or  $\text{AgCl}$ . Smooth ligand exchange reactions of these ansa-vanadocene dichlorides afford acetylacetonato cations II and binaphtholate complexes III; from these, the dichlorides are regenerated by exposure to  $\text{MgCl}_2$  in THF solution. Separation of meso and rac isomers (as well as enantiomer separation) is achieved via corresponding binaphtholate complexes; conversion to the V(III) diisonitrile cations  $\text{Me}_4\text{C}_2(3\text{-R-C}_5\text{H}_3)_2\text{V}(\text{CnEt-Bu})_2^+$  allows an assessment of diastereoisomer ratios by  $^1\text{H}$  NMR. Lewis-acidic bistriflate derivs. of these ansa-vanadocene complexes were obtained from the dichlorides by reaction with  $\text{Ag}$  triflate.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:148796 CAPLUS

DN 126:157639

TI Transformation of achiral meso-form or racemates of ansa-metallocene complexes or their mixture to the pure enantiomeric form

IN Fischer, David; Langhauser, Franz; Stuermer, Rainer; Kerth, Juergen; Schweier, Guenther; Brintzinger, Hans-Herbert; Schmidt, Katrin

PA BASF A.-G., Germany

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19525184	A1	19970116	DE 1995-19525184	19950711

WO 9703081 A1 19970130 WO 1996-EP2869 19960701  
W: CN, JP, US  
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
EP 837866 A1 19980429 EP 1996-924832 19960701  
EP 837866 B1 20011114  
R: AT, BE, DE, ES, FR, GB, IT, NL, FI  
CN 1190399 A 19980812 CN 1996-195406 19960701  
CN 1065867 B 20010516  
JP 11508597 T2 19990727 JP 1996-505468 19960701  
AT 208786 E 20011115 AT 1996-924832 19960701  
US 5840950 A 19981124 US 1998-981638 19980108  
PRAI DE 1995-19525184 A 19950711  
WO 1996-EP2869 W 19960701

OS MARPAT 126:157639

AB Transformation of achiral meso-form or racemates of ansa-metallocene complexes or their mixture to pure enantiomeric form via photochem. treatment is described. Thus, reaction of (1:1) rac./meso mixture of dimethylsilanediylbis(2-methyl-4-tert-butyl-1-cyclopentadienyl)zirconium dichloride with R-(+)-1,1'-bi-2-naphtholatodilithium in PhMe under photolysis at 40° gave enantiomerically pure dimethylsilanediylbis(2-methyl-4-tert-butyl-1-cyclopentadienyl)zirconium 1,1'-bi-2-naphtholate.

L5 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:140220 CAPLUS

DN 126:144415

TI Transformation of achiral meso-form of ansa-metallocene complexes to the chiral rac-form

IN Fischer, David; Langhauser, Franz; Kerth, Juergen; Schweier, Guenther; Brintzinger, Hans-Herbert; Schmidt, Katrin

PA BASF A.-G., Germany

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19525178	A1	19970116	DE 1995-19525178	19950711
	WO 9703080	A1	19970130	WO 1996-EP2868	19960701
	W: CN, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 837865	A1	19980429	EP 1996-924831	19960701
	EP 837865	B1	20011212		
	R: BE, DE, ES, FR, GB, IT, NL				
	CN 1190398	A	19980812	CN 1996-195405	19960701
	CN 1065866	B	20010516		
	JP 11508596	T2	19990727	JP 1996-505467	19960701
	US 5912373	A	19990615	US 1997-981100	19971217
PRAI	DE 1995-19525178	A	19950711		
	WO 1996-EP2868	W	19960701		

OS MARPAT 126:144415

AB Transformation of achiral meso-form of ansa-metallocene complexes to chiral rac-form via photochem. treatment is described. Thus, reaction of (1:1) rac./meso mixture of dimethylsilanediylbis(2-methyl-4-tert-butyl-1-cyclopentadienyl)zirconium dichloride with 1,1'-bi-2-naphtholatodilithium in C6D6 in NMR tube under Hg lamp photolysis at 40° gave 100% rac-dimethylsilanediylbis(2-methyl-4-tert-butyl-1-cyclopentadienyl)zirconium 1,1'-bi-2-naphtholate.

L5 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:699776 CAPLUS

DN 123:256901

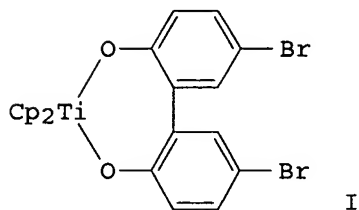
TI Addition of a sterically hindered, chiral crotyl ansa-titanocene complex to aldehydes

AU Kuntz, Bradley A.; Ramachandran, Ravindranath; Taylor, Nicholas J.; Guan, Jinying; Collins, Scott

CS Department of Chemistry, University of Waterloo, Waterloo, ON, N2L 3G1, Can.

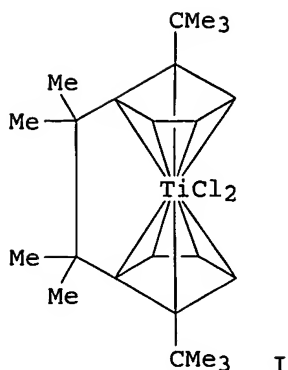
SO Journal of Organometallic Chemistry (1995), 497(1-2), 133-42  
 CODEN: JORCAI; ISSN: 0022-328X  
 PB Elsevier  
 DT Journal  
 LA English  
 AB The compound [S]-1,2-ethylenebis(3-t-butylcyclopentadienyl)titanium dichloride ([S]-5) can be obtained in high optical purity through kinetic resolution of the racemate (rac-5) using [S]-binaphthol. The structure of rac-1,2-ethylenebis(3-t-butylcyclopentadienyl)titanium binaphtholate (rac-7) was determined by X-ray crystallog.: C<sub>40</sub>H<sub>40</sub>O<sub>2</sub>Ti, monoclinic, P2<sub>1</sub>/c, a = 14.455(3) Å, b = 13.710(3) Å, c = 17.278(4) Å, β = 109.80(2) °, V = 3221.7(13) Å<sup>3</sup>, Z = 4, 4599 observed reflections with F<sub>2</sub> ≥ 6σ(F), R = 0.0337, R<sub>w</sub> = 0.0359. The addition of [S]-(1-methylallyl)-1,2-ethylenebis(3-t-butylcyclopentadienyl)titanium ([S]-6), formed in situ from [S]-5, to aldehydes was investigated and provides β-Me homoallylic alcs. in moderate yields. The stereoselectivity of the reaction and the sense of asym. induction depends on the steric bulk of the aldehyde. The results were rationalized using the results of a mol. modeling study on transition state models which reproduced the general trends in the exptl. results.

L5 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1994:270668 CAPLUS  
 DN 120:270668  
 TI Some new complexes of bis(cyclopentadienyl) or bis(methylcyclopentadienyl)titanium(IV)  
 AU Wu, Shaozu; Chen, Yin; Zhang, Yulan  
 CS Dep. Chem., Lanzhou Univ., Lanzhou, 730000, Peop. Rep. China  
 SO Gazzetta Chimica Italiana (1993), 123(11), 651-2  
 CODEN: GCITA9; ISSN: 0016-5603  
 DT Journal  
 LA English  
 OS CASREACT 120:270668  
 GI



AB Eight new cyclic complexes, e.g. I, of bis(cyclopentadienyl)- or bis(methylcyclopentadienyl)titanium(IV) have been synthesized by reacting Cp<sub>2</sub>TiCl<sub>2</sub> with HZ-ZH in the presence of sodium amide (Cp = cyclopentadienyl, HZ-ZH = substituted and unsubstituted dibasic phenols, biphenols, and binaphthols); these compds. were characterized on the basis of their elemental analyses and spectral (IR and <sup>1</sup>H NMR) data.

L5 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1991:680169 CAPLUS  
 DN 115:280169  
 TI Stereoselectivity in the synthesis of tetramethylethano-bridged 3,3'-di-tert-butyltitanocene dichloride  
 AU Erickson, Mark S.; Fronczek, Frank R.; McLaughlin, Mark L.  
 CS Dep. Chem., Louisiana State Univ., Baton Rouge, LA, 70803-1804, USA  
 SO Journal of Organometallic Chemistry (1991), 415(1), 75-85  
 CODEN: JORCAI; ISSN: 0022-328X  
 DT Journal  
 LA English  
 OS CASREACT 115:280169  
 GI



AB Racemic (I) and meso ansa-(2,3-dimethyl-2,3-butano)-3,3'-bis(1,1'-dimethylethyl)cyclopenta-1,3-dien-5-yl)titanium dichloride were prepared in a 1:4 to 1:2 ratio by the addition  $\text{TiCl}_3 \cdot 3\text{THF}$  to 2,3-bis[3-(1,1-dimethylethyl)-1,3-cyclopentadien-5-yl]-2,3-dimethylbutanediolithium (II) in THF with subsequent oxidation by HCl in a 44% yield. A 30% yield of the 1:1 racemic:meso ratio resulted when II was treated with titanocene dichloride in THF followed by carbon tetrachloride oxidation. In the attempts to synthesize the desired anti isomer, II was treated with in-situ generated racemic dichloro-1,1'-bi-2-naphtholatetitanium(IV) to give ansa-(2,3-dimethyl-2,3-butano)-anti-3,3'-bis(1,1-dimethylethyl)cyclopenta-1,3-dien-5-yl)titanium 1,1'-bi-2-naphtholate in a 10-15% yield. The mol. contains an approx. C2 axis of symmetry with the tert-Bu groups anti to each other.

L5 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1990:552650 CAPLUS

DN 113:152650

TI General synthetic routes to chiral, ethylene-bridged ansa-titanocene dichlorides

AU Collins, Scott; Hong, Yaping; Taylor, Nicholas J.

CS Guelph Waterloo Cent. Grad. Work Chem., Univ. Waterloo, Waterloo, ON, N2L 3G1, Can.

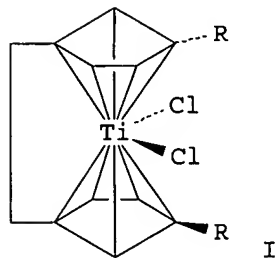
SO Organometallics (1990), 9(10), 2695-703  
CODEN: ORGND7; ISSN: 0276-7333

DT Journal

LA English

OS CASREACT 113:152650

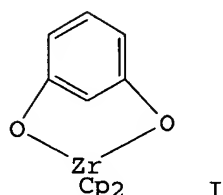
GI



AB Two synthetic routes for the preparation of chiral [1,2-ethylenebis( $\eta^5$ -3-alkylcyclopentadienyl)]titanium dichlorides [I, R = Me, Et, Me<sub>2</sub>Et, Me<sub>3</sub>C (II)] are described. I are prepared from  $\text{TiCl}_3 \cdot 3\text{THF}$  and the corresponding 1,2-ethylenebis(3-alkyl-1,3-cyclopentadienes) (III) in 80-85% yields. A mixture of rac-(I) and meso-titanocene dichlorides, resp., is produced on reaction of the dilithium salts of III with  $\text{TiCl}_3$  (the ratio of rac:meso varies between 1:1.3 and 1:2.0). II crystallizes in two distinct modifications, both of which were characterized by X-ray crystallog. The conformations adopted by the ansa ligand in the two modifications are

markedly different; it appears that the energy difference between the two conformers is probably low and might be influenced by crystal-packing effects.

L5 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1990:497742 CAPLUS  
DN 113:97742  
TI Synthesis of some cyclic bis(cyclopentadienyl)zirconium or  
bis(methylcyclopentadienyl)zirconium aromatic oxide derivatives  
AU Yin, Rongjun; Shen, Huafeng  
CS Lanzhou Univ., Lanzhou, Peop. Rep. China  
SO Lanzhou Daxue Xuebao, Ziran Kexueban (1989), 25(3), 45-8  
CODEN: LCTHAF; ISSN: 0455-2059  
DT Journal  
LA Chinese  
GI



AB Four new title compds., e.g., I, were synthesized by reaction of  $\text{Cp}_2\text{ZrCl}_2$  (Cp = cyclopentadienyl) or  $(\text{MeC}_5\text{H}_4)_2\text{ZrCl}_2$  with 2,2'-dihydroxybiphenyl, 1,1'-dihydroxy-2,2'-binaphthyl or resorcinol.

L5 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1990:458402 CAPLUS  
DN 113:58402  
TI Catalytic activities of organometallic complexes for the cross-coupling reaction of benzoyl chloride with Grignard reagent  
AU Qiu, Changlong; Yang, Jigang  
CS Lanzhou Univ., Lanzhou, 730001, Peop. Rep. China  
SO Wuji Huaxue Xuebao (1989), 5(3), 80-4  
CODEN: WHUXEO; ISSN: 1001-4861  
DT Journal  
LA English  
AB When Ce, Pr, Nd, Sm, Ho, and Er were used as the catalyst, the yield and selectivity of the title reaction was excellent. The catalytic activity of organotitanium compds. is also as good as the classical Ni-P(dppp) catalyst.

L5 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1990:424116 CAPLUS  
DN 113:24116  
TI Synthesis of cyclic bis(cyclopentadienyl)titanium and bis(methylcyclopentadienyl)titanium aromatoxide derivatives  
AU Shen, Huafeng; Yin, Rongjun  
CS Dep. Chem., Lanzhou Univ., Lanzhou, Peop. Rep. China  
SO Wuji Huaxue Xuebao (1989), 5(2), 117-20  
CODEN: WHUXEO; ISSN: 1001-4861  
DT Journal  
LA Chinese  
AB A series of title compds. have been synthesized by the reaction of  $\text{Cp}_2\text{TiCl}_2$  or  $(\text{MeCp})_2\text{TiCl}_2$  with 2,2'-dihydroxybiphenyl, 1,1'-dihydroxy-2,2'-binaphthyl or resorcinol in refluxing benzene and in the presence of sodamide.

L5 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 1979:593374 CAPLUS  
DN 91:193374  
TI ansa-Metallocenes. 2. 1,1'-Trimethylene-bis( $\eta^5$ -3-tert-butylcyclopentadienyl)titanium(IV) dichloride, a chiral ansa-titanocene



derivative  
AU Schnutenhaus, Horst; Brintzinger, Hans H.  
CS Univ. Konstanz, Konstanz, D-7750, Fed. Rep. Ger.  
SO Angewandte Chemie (1979), 91(10), 837-8  
CODEN: ANCEAD; ISSN: 0044-8249  
DT Journal  
LA German  
GI For diagram(s), see printed CA Issue.  
AB The reaction of  $\text{TiCl}_3$  with 1,3-bis(3-tert-butylcyclopentadienyl)propane gave the title compound, which, with Na or  $\text{NaNH}_2$  and (S)-(-)-1,1'-bi-2-naphthol, gave optically active I.